

Appendix D

Department of Fish and Game Species and Habitat Information Sources

Further information on California habitats and wildlife species is available on Fish and Game's Web site. This appendix is intended only as a guide for locating additional information, not as a source of the information itself. A general guide to departmental publications can be found at <http://www.dfg.ca.gov/coned/publications.html>.

A complete list of California's mammals, birds, reptiles, and amphibians can be found at <http://www.dfg.ca.gov/bdb/html/cawildlife.html>, which includes a link to Species Notes arranged by each major group. (These notes are integrated with Fish and Game's California Habitat Relationship Database software as Wildlife Notes.)

Department of Fish and Game Species Information

Current lists of threatened and endangered animals in the state can be found on Fish and Game's Web site at <http://www.dfg.ca.gov/bdb/html/animals.html>. Two lists are available: *State and Federally Listed Endangered and Threatened Animals of California* and the more inclusive *Special Animals List*, maintained by Fish and Game's California Natural Diversity Database (CNDDDB). The Web site states that:

"Special Animals" is a general term that refers to all of the **taxa** the CNDDDB is interested in tracking, regardless of their legal or protection status. These taxa generally fall into one or more of the following categories:

1. Officially listed or proposed for listing under the state and/or federal Endangered Species Acts.
2. State or federal candidate for possible listing.
3. Taxa that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Quality Act Guidelines.

4. Taxa considered by Fish and Game to be a Species of Special Concern (CSC).
5. Taxa that are biologically rare, very restricted in **distribution**, declining throughout their range, or have a critical, vulnerable stage in their life cycle that warrants monitoring.
6. Populations in California that may be on the periphery of a taxon's range but are threatened with **extirpation** in California.
7. Taxa closely associated with a **habitat** that is declining in California at an alarming rate (e.g., wetlands, riparian, old growth forests, desert aquatic systems, native grasslands, vernal pools).
8. Taxa designated as a special status, sensitive, or declining species by other state or federal agencies or nongovernmental organization (NGO).

Fish and Game also maintains reports on Species of Special Concern at <http://www.dfg.ca.gov/hcpb/species/ssc/ssc.shtml>. Species of Special Concern status is defined as:

"Species of Special Concern (SSC)" status applies to animals not listed under the federal Endangered Species Act or the California Endangered Species Act but which nonetheless are declining at a rate that could result in listing or historically occurred in low numbers and known threats to their persistence currently exist. SSC share one or more of the following criteria:

1. occur in small, isolated populations or in fragmented habitat and are threatened by further isolation and population reduction.
2. show marked population declines. Population estimates are unavailable for the vast majority of taxa. Species that show a marked population decline, yet are still abundant, do not meet the Special Concern definition, whereas marked population decline in uncommon or rare species is an inclusion criterion.
3. depend on a habitat that has shown substantial historical or recent declines in size. This criterion infers the population viability of a species based on trends in the habitats upon which it specializes. Coastal wetlands, particularly in the urbanized San Francisco Bay and south-coastal areas, alluvial fan sage scrub and coastal sage scrub in the southern coastal basins, and arid scrub in the San Joaquin Valley, are examples of California habitats that have seen dramatic reductions in size in recent history. Species that specialize in these habitats generally meet the criteria for Threatened or Endangered status or Special Concern status.
4. occur only in or adjacent to an area where habitat is being converted to land uses incompatible with the animal's survival.
5. have few California records, or which historically occurred here but for which there are no recent records.
6. occur largely on public lands but where current management practices are inconsistent with the animal's persistence.

Detailed biological, taxonomic, distribution, range, status, and management information for animals considered Species of Special Concern can be found at <http://www.dfg.ca.gov/hcpb/info/info.shtml>. The information is presented by major vertebrate groups (fish, mammals, amphibians and reptiles, and birds).

Fish and Game's Habitat Conservation Planning Branch's Web page at <http://www.dfg.ca.gov/hcpb/species/species.shtml> contains a Sensitive Species section with links to species accounts for rare, threatened, and endangered species, "fully protected species," and Species of Special Concern.

Species of Special Concern Reports for fishes, birds, mammals, and reptiles and amphibians, and a pdf version of The Status of Rare, Threatened, and Endangered Animals and Plants of California—Annual Report for 2000 (and updates) can be found at <http://www.dfg.ca.gov/hcpb/info/info.shtml>. This legislatively mandated report contains accounts for state-listed species for which new information on distribution or biology had recently become available at the time of publication.

The California Natural Diversity Database (CNDDDB) tracks occurrences of rare, threatened, and endangered plants, animals, and natural communities in the state. Information about the CNDDDB can be found at <http://www.dfg.ca.gov/bdb/html/cnddb.html>. The Animals link on the menu leads to pdf versions of the Special Animals List and the Endangered and Threatened Animals List. Vegetation Mapping and Classification and Natural Communities links lead to pages with information (and future maps) on vegetation maps for the state and a list of Natural Communities, useful for wildlife habitat information.

Rare Find is a subscription-based software product based on the California Natural Diversity Database (CNDDDB). It contains text and spatial data on animals contained on Fish and Game's Special Animals List and plants on the Special Vascular Plants, Bryophytes, and Lichens List. A description of Rare Find features and ordering instructions are available on the Wildlife and Habitat Data Analysis Branch Web page, <http://www.dfg.ca.gov/bdb/html/rarefind.html>.

Also available online is CNDDDB's Quick Viewer—a free service at http://www.dfg.ca.gov/bdb/html/quick_viewer_launch.html—which presents, in table form, CNDDDB elements (both individual taxa and natural communities) by USGS 7.5' quads or by counties.

Various Fish and Game online publications concerned with fish, including freshwater species accounts, as well as individual publications on California trout species and anadromous, freshwater, and warm water fishes, are available at http://www.dfg.ca.gov/fishing/html/Publications/Publications_0.htm. Fish identification guides and a life history database can be viewed and downloaded at <http://www.dfg.ca.gov/mrd/education.html>.

Fish and Game's publication California's Living Marine Resources: A Status Report, which contains biological accounts and population status information for marine and anadromous commercial fisheries species (including invertebrate species as well as fishes) and other resident and migrating marine species such as cetaceans and pinnipeds, is available at <http://www.dfg.ca.gov/mrd/status/index.html>.

Species accounts and other information from the Fish and Game Marine Region for selected marine wildlife species can be found at <http://www.dfg.ca.gov/mrd/education.html>.

Department of Fish and Game Habitat Information

The California Wildlife Habitat Relationship (CWHR) Database is a database application that uses geographic distribution, relationships to habitat types and stages, seasonal use patterns, and presence of habitat elements to predict habitat suitability for 675 terrestrial vertebrates, including all terrestrial species in California and those subspecies included on Fish and Game's Special Animals List. It includes BIOVIEW, an application that translates habitat suitability values for wildlife species into data that can be used with a Geographic Information System. Information and downloading of

the CWHR database is available at <http://www.dfg.ca.gov/bdb/html/cwhr.html>. In 1999, an expansion of the marine and estuarine habitat classification scheme used in the database was begun. Further information on this project is available at http://www.dfgca.gov/bdb/cwhr/pdfs/Preliminary_Marine_Estuarine.pdf.

The California Wildlife Habitat Relationship System provides information and modeling capabilities for California habitat types, with links to descriptions and distribution maps for each type, and is available online at http://www.dfg.ca.gov/bdb/html/wildlife_habitats.html.

Department of Fish and Game GIS Information

BIOS (Biogeographic Information and Observation System) data viewer, <http://bios.dfg.ca.gov/>, is a collection of distribution maps for Fish and Game and its partners only and contains various data sets from voluntary contributors. A password is necessary to access BIOS but can be obtained by qualified researchers by following the instructions on the Web page.

Marine resource maps, including fish ranges for nearshore fishes and kelp bed distribution, can be found at http://www.dfg.ca.gov/itbweb/gis/mr_nat_res.htm.

CalFish, <http://www.calfish.org/DesktopDefault.aspx>, is a cooperative project between the Department of Fish and Game and outside collaborators. Included on the Web site are links to species accounts for California freshwater and anadromous fish and an Internet-based map viewer with spatial distribution data for several species.